Finance and Administration Cabinet
COMMONWEALTH OFFICE OF TECHNOLOGY

Proposed Projects Involving the State General Fund (cash or bonds)*

Priority		Project Title / Description	Total Budget
Cabinet	Agency		

2006-2008

1	1	**Public Safety Comm. Infrastructure - KEWS**	**$13,000,000**

The analog wireless infrastructure known as the Kentucky Emergency Warning System (KEWS) is a highly survivable and redundant wireless communications system providing network inter-connectivity carrying radio control, data, video and emergency voice traffic for public safety and emergency agencies. Once the conversion of the KEWS system from an analog to digital network, this project will allow the Commonwealth to begin carrying critical services such as voice and data transmission on the digital network. COT originally requested $26,000,000 to achieve the conversion of KEWS from analog to digital; subsequently authorized for $ 13,768,000, this project must now be accomplished in two phases, and why COT is now requesting $13,000,000 to complete the conversion.

8	2	**Statewide Microwave Network Maintenance**	**$1,500,000**

This project is used to conduct critical preventive maintenance on KEWS infrastructure components. Maintenance is necessary until the system is upgraded to maintain user reliability and to accommodate user needs. Due to the age of the KEWS microwave equipment and the criticality of its role to public safety, continued funding for this project is critical.

5	3	**Data Center Readiness**	**$4,900,000**

Data Center readiness assessments were performed to prepare the Commonwealth Data Center (CDC) for consolidation of distributed agency IT data centers. It was assessed at a Tier II level based on the Uptime Institute Classification Tiers. COT desires to increase to the Tier level to a Tier III. A Tier II has redundancy of major components, but has single points of failure and lacks the full redundancy of the power and cooling distribution typically associated with newer and more highly reliable data centers. Focus areas for CDC includes upgrades for architectural, fire protection, mechanical, electrical, security, environmental monitoring, cable plants and fitments of an alternate data center. As IT consolidation progresses it is critical to support and maintain a data center that provides high reliability of IT services. The upgrade areas described above will ensure the Commonwealth Enterprise class data center provides agencies and citizens high reliability and availability of business services.

7	4	**Kentucky Infrastructure Preparedness**	**$6,500,000**

The Commonwealth Office of Technology (COT) provides strategic and operational support for all major statewide applications, as well as agency specific applications. COT also provides and manages the network communications infrastructure that provides connectivity for applications, users and locations across the Commonwealth. During FY 02/03, COT awarded and managed the contract for Disaster Recovery Planning services for all applications supported by COT and deemed critical by the responsible state agency. This project allowed COT to begin to implement the recommendations for disaster recovery improvements from the planning phase. The Kentucky Infrastructure Preparedness project will provide a second mainframe computer along with supporting devices, and the selection of a remote secure underground site to create an internal disaster recovery capability for the Commonwealth. This capability would also provide a quality assurance and test

platform for Commonwealth development staff to utilize to ensure the continued and uninterrupted operation of the current production computing environment. Additionally, this facility will reduce the costs of the current disaster recovery contract. All recovery efforts would be internal to state government operations. The selection of a secured underground site would centralize all mainframe recovery efforts including the storage of data. The business drivers for this project include:
- Homeland Security / Preparedness
- Requirement for 50 - 100 mile distance radius
- "Hardened" recovery site
- Full replication of mission critical systems
- Hot backup of all systems

2008-2010

Kentucky Infrastructure Preparedness (2)   **$1,544,000**
This funding amount continues to build-out the disaster recovery services established by the Kentucky Infrastructure Preparedness project. The Commonwealth Office of Technology (COT) provides strategic and operational support for all major statewide applications, as well as agency specific applications. COT also provides and manages the network communications infrastructure that provides connectivity for applications, users and locations across the Commonwealth. During FY 02/03, GOT awarded and managed the contract for Disaster Recovery Planning services for all applications supported by COT and deemed critical by the responsible state agency. This project allows COT to begin to implement the recommendations for disaster recovery improvements from the planning phase. The business drivers for this project include:
- Homeland Security / Preparedness
- Requirement for 50 - 100 mile distance radius
- "Hardened" recovery site
- Full replication of mission critical systems
- Hot backup of all systems

2010-2012

Kentucky Infrastructure Preparedness (3)   **$1,544,000**
This funding amount continues to build-out the disaster recovery services established by the Kentucky Infrastructure Preparedness project. The Commonwealth Office of Technology (COT) provides strategic and operational support for all major statewide applications, as well as agency specific applications. COT also provides and manages the network communications infrastructure that provides connectivity for applications, users and locations across the Commonwealth. During FY 02/03, GOT awarded and managed the contract for Disaster Recovery Planning services for all applications supported by COT and deemed critical by the responsible state agency. This project allows COT to begin to implement the recommendations for disaster recovery improvements from the planning phase. The business drivers for this project include:
- Homeland Security / Preparedness
- Requirement for 50 - 100 mile distance radius
- "Hardened" recovery site
- Full replication of mission critical systems
- Hot backup of all systems

*Notes
- Unless otherwise indicated, the total budget would be financed from the state General Fund (cash or bonds).
- Priority rankings were required to be assigned only to those projects proposed for 2006-08; projects for 2008-10 and 2010-12 are listed in alphabetical order.
- Descriptions are as provided in the "Brief Description and Justification" field of the agency's capital plan submission.

Finance and Administration Cabinet
COMMONWEALTH OFFICE OF TECHNOLOGY

Proposed Projects NOT Involving the State General Fund

Project Title / Description   Total Budget   Source(s)

2006-2008

Centralized Voice Services   **$3,000,000**   **RF**
The Centralized Voice Services project provides centralized voice and data services throughout Frankfort Metropolitan Area Network (MAN). The project will upgrade or replace existing voice systems with a centralized, redundant, and survivable system.

Enterprise Applications Upgrade   **$1,000,000**   **RF**
The Enterprise Applications Upgrade Project will encompass two efforts: Active Directory and the Exchange Email System.

Active Directory is the authentication database against which employees are verified to access enterprise services throughout the Commonwealth. The Exchange 2003 messaging infrastructure is the messaging platform which will utilize the Active Directory database for authentication and directory information. The project will fund the migration and license costs to migrate the Commonwealth infrastructure to the current versions.

Included will be the costs of infrastructure servers, operating systems licenses, contractor services, monitoring, and support tools.

Enterprise Data Messaging Infrastructure   **$1,000,000**   **RF**
Agencies of the Commonwealth collect a wealth of information from the various programs that they administer, and store these individual collections of data within independent applications and databases. There is great opportunity to share and relate this information across the programs of the Commonwealth, and within individual agencies who find it difficult to relate important information between programs.

This capital project will enable the Commonwealth Office of Technology to establish one strategic data messaging infrastructure to support the data sharing needs of all Commonwealth agencies.

Enterprise Data Warehouse and Integration   **$2,500,000**   **RF**
The Enterprise Data Warehouse and Integration Infrastructure will be a critical environment for use by all agencies. It will not only help them to deliver their services to citizens, business, and employees by giving them access to cross-enterprise data, but it will allow for realigning and positioning of their services based upon historical data and trend analysis. The Enterprise Data Warehouse and Integration project will establish a centralized infrastructure from which the Commonwealth can provide an integration vehicle of information.

Enterprise Desktop/Laptop Refresh   **$16,000,000**   **RF**
The agencies of the Executive Branch have reached a critical stage with the current condition of desktop and laptop computers. Some of the computers now in use are not sufficient to run the latest operating systems and are running operating systems that are nearing their End of Life Cycle. These deficiencies also mean that from desk to desk employees have to run different versions of the same software, sometimes causing compatibility issues that result in frustration by the employees and costing the Commonwealth dollars in the lost time.

The Enterprise Desktop/Laptop Refresh Project will provide capital funds for the replacement of 9,000 Executive Branch computers in each year of the biennium. This number represents 1/4 of the branch's approximate 36,000 desktop computers, and places the branch in a position to refresh its desktop technology every four years.

It is estimated that 9,000 systems can be replaced each year at a cost of $8,000,000 representing $16,000,000 over the biennium.

COT would serve as the purchasing broker for the branch's desktop needs, and would recover the restricted fund costs through its existing chargeback structure.

Enterprise Identity and Access Management   **$1,500,000**   **RF**
Similar in scope, pervasiveness, functionality and complexity as the Commonwealth's email environment is today, the planned Enterprise Identity and Access Management (IAM) Infrastructure will be a critical facility for use by all agencies that want to deliver their services to citizens, business, constituents and employees through the Commonwealth's Internet portal (Kentucky.gov).

The business drivers for the establishment of an Enterprise IAM Infrastructure include:
-   Improved Security Measures for On-line Applications and Traditional Computing Environments
-   Security Policy Re-enforcement (passwords, etc.)
-   Improved Security Audit Compliance
-   A Simplified Security Management Process
-   Improved Customer Service and Convenience (single sign-on, self-service, 7/24)
-   Reduced Operations Support (Applications Development, Help Desk, etc.)
-   Lower Operational Costs for all Commonwealth Internet Accessible Systems

Enterprise Imaging and Document Management   **$1,400,000**   **RF**
Consistent with the Commonwealth Office of Technology's ongoing implementation of an Enterprise Architecture that fully supports the efficient conduct of state business, as well as COT's provision of shared infrastructure services, this project establishes a central Imaging and Document Management (I/DM) Service for agencies in the executive branch of state government. This service creates a cost-effective capacity for agencies to meet I/DM requirements and to integrate and/or displace disparate agency image/document management projects and capacities. It capitalizes on (1) existing enterprise imaging and recordkeeping standards and price contracts, and (2) prior implementation of the Kentucky Department for Libraries and Archives Document Management / Digitization System (DMDS), which established an enterprise-class data conversion and imaging service for state government in 2002. The project will establish standards and a software and hardware platform for document management throughout the enterprise. Finally, it will complement the enterprise data integration project by linking and normalizing diverse data and document-based systems, to the extent possible.

Enterprise Infrastructure Security   **$1,000,000**   **RF**
The Commonwealth Office of Technology (COT) provides the infrastructure and related support for the Commonwealth's computing and communications environment. As part of the infrastructure support, COT also provides security applications and systems in order to reduce risk and better protect state government resources. COT currently provides enterprise firewall support, virtual private networking (VPN) services and intrusion detection systems (IDS) to attempt to protect applications, systems and networks.

Providing more of a secure infrastructure is critical to protecting the resources of the Commonwealth and maintaining public confidence. COT has reviewed and investigated thousands of security-related incidents in the past twelve months. It is likely that even more potential security issues go unnoticed each day. In order to better protect resources, additional systems need to be implemented. These systems will include additional firewalls and IDS devices, e-mail filtering systems, Public Key Infrastructure (PKI) systems, web filtering systems, security content management systems and various host and network security devices.

Enterprise Print Service   **$3,000,000**   **RF**
The Commonwealth Office of Technology (COT) has established plans, procedures and contingencies to provide production printing services for agencies of the Commonwealth to assist in getting mission critical

information to the citizens of the Commonwealth. COT leases high-speed B/W printers to support the needs of the agencies at a cost of $575,000 per year. COT also owns two highlight color devices to support the printing needs of the Department of Revenue, which costs $125,000 per year.

Enterprise Project Management Information System   **$850,000**   **RF**
The Commonwealth Office of Technology maintains an enterprise project management office (PMO) promoting statewide collaboration, sharing, visibility, and review of technology projects. This capital project will allow the COT Project Management Office to offer a statewide automated project repository for use by state agencies.

Enterprise Server (z/OS) Upgrade/Replacement   **$1,200,000**   **RF**
Historically, COT has maintained greater than 95% capacity utilization of the mainframe and delayed updates or upgrades as long as possible. However, we must plan for the possibility of growth spurts, latent demand, technological advances or end-of-life maintenance issues creating the need to upgrade or replace the centralized mainframe platform.

Enterprise Server Consolidation   **$500,000**   **RF**
With the proliferation of single applications being deployed on independent servers or server farms, COT must plan for consolidating computing resources. As technology matures we are challenged to implement the best solutions that maximize the Commonwealth's return on investment.

Server Consolidation is the process of merging small to medium application and file servers to larger, more robust servers reducing the total number of servers and support costs by 25%. Server refresh will account for 60% of the total servers purchased. The project will enable the use of enterprise storage and disaster recovery contracts by connecting to existing devices currently in service.

The purchase of consolidation servers will enable administrators to utilize a centralized storage strategy that will provide better supportability by being able to structure a new filing system to efficiently allocate storage to users as well as enhancing the backup/restore time 99% more efficiently by using newer technology.   The same centralized technology can also be used for the many consolidated applications without purchasing addition server upgrades as storage requirements increase, thus reducing the total cost of ownership.

Enterprise Service Center   **$1,900,000**   **RF**
The Commonwealth Office of Technology (COT) will implement processes and procedures based on ITIL best practices to evolve the current Help Desk into a fully functional Service Center.   This will include a new installation of the Help Desk Tool and knowledgebase as well as the integration of the Asset Management, Change Management and Configuration Management modules.   The Service Center will be the single point of contact for all customers requiring IT support from COT.

With IT consolidation initiatives underway it is critical that proactive 24X7X365 service management models are in place to monitor and alert staff of potential infrastructure and/or application problems supported by COT. The costs associated with this initiative will provide numerous software toolsets and support components to provide adequate systems to proactively manage the Commonwealth IT environment.

A comprehensive Service Center will make it easier for customers to receive IT support from COT. The service Center will facilitate the restoration of normal operational services within agreed service levels and business priorities, while improving the usage of IT support resources and reducing the overall cost for IT support.

A consolidated network operations center will reduce costs associated with loss of IT services and ensure high availability of IT infrastructure and services. The investment in these tools and processes will decrease ongoing operational expenses over the life of the various systems supported.

Project Title / Description	Total Budget	Source(s)

Enterprise Software Development Infrastruct.   **$1,550,000**   **RF**

The implementation of an Enterprise Software Development Infrastructure will allow the Commonwealth to transform antiquated software development operations into a modern service-oriented architecture (SOA) that can deliver interoperability between heterogeneous applications and technologies and leverage reuse of components and applications throughout the Enterprise. This capability will speed the time from inception to delivery of internally developed software applications without sacrificing quality. This will result in a faster software development lifecycle which in turn will result in reduced development costs and faster realization of returns on investment. Benefits include reduced maintenance costs, increased customer confidence and ease of upgrade/change through well-designed, low defect software.

Enterprise Software Licenses   **$15,000,000**   **RF**

The Executive Branch of Kentucky State Government is comprised of approximately 36,000 desktop and laptop computers. Across these varied computers, exists varying types and versions of standard software programs that agencies routinely use to conduct business. The types of software include operating systems, office productivity, electronic mail, databases, and virus and other security related products. Today, these software products are purchased and licensed on a per user / per cabinet / per agency basis.

This project represents an enterprise approach to licensing the most commonly required software products for the computers of the executive branch. By pooling these expenditures, the Commonwealth can maximize its spending power and ensure that all needed products are adequately licensed and purchased. The project also serves to ensure that standard products and versions are used across the enterprise.

Enterprise Storage Upgrade   **$1,200,000**   **RF**

The Commonwealth Office of Technology maintains a computing facility shared by all state agencies. This facility houses computer servers that perform the computing required by Kentucky's important enterprise applications such as MARS, UPPS, social welfare and social services systems, vehicle registration, employment assistance, and the integrated tax systems as well as many others. The servers that support these critical enterprise applications utilize disk storage systems to store trillions of characters of information required to support these applications. Disk storage systems must be upgraded or replaced to accommodate growing data requirements, and to replace aging equipment that would otherwise become unreliable.

Ky Information Highway Expansion   **$3,950,000**   **RF**

The Kentucky Information Highway (version 2) is a network infrastructure built on modern transport technologies that allow COT to extend network resources to every Agency in every county. KIH-2 also allows the COT to deploy mew service offerings that were previously unavailable because of technological constraints.

The Commonwealth can lower its cost of ownership by implanting new transport technologies. These modern technologies increase bandwidth at a lower cost when compared to legacy transport mechanisms presently deployed today. The estimated savings per year that will be achieved by moving to the new transport technologies are expected to be 3-4 Million per year as compared to current use. It is anticipated that the KIH2 will provide approximately a 20% reduction of enterprise network costs (on average).

Statewide Digital Orthoimagery Basemap Update   **$1,000,000**   **RF**

The initiative will continue the effort to build a shared basemap that can meet the needs of its users at the state, federal, local, and regional level. A common basemap reduces the cost of developing GIS applications and promote data sharing. Access to the basemap will be made available in the public domain.

The initial coverage was created from aerial photography flown from 1992 through 1998 (with some very limited coverage from 1999) at a cost of approximately $2,400,000 (2,930 quarter quads covering over 40,000 square miles). Of this, Kentucky's share was $600,000.

The rest was funded through federal programs administered by the US Geological Survey (USGS), Farm Service Agency (FSA), and Natural Resources Conservation Service (NRCS).

As the only accurate large scale aerial imagery available for most of Kentucky, particularly the more rural areas, this imagery is widely used. For example, nearly all PVA offices now use the DOQQs as a base for their parcel maps.

2008-2010

Centralized Voice Services (2) $4,000,000   RF
The Centralized Voice Services project provides centralized voice and data services throughout Frankfort Metropolitan Area Network (MAN). The project will upgrade or replace existing voice systems with a centralized, redundant, and survivable system.

Enterprise Applications Upgrade (2) $660,000   RF
The Enterprise Applications Upgrade Project will encompass two efforts: Active Directory and the Exchange Email System.

Active Directory is the authentication database against which employees are verified to access enterprise services throughout the Commonwealth. The Exchange 2003 messaging infrastructure is the messaging platform which will utilize the Active Directory database for authentication and directory information. The project will fund the migration and license costs to migrate the Commonwealth infrastructure to the current versions.

Included will be the costs of infrastructure servers, operating systems licenses, contractor services, monitoring, and support tools.

Enterprise Data Messaging Infrastructure (2) $750,000   RF
Agencies of the Commonwealth collect a wealth of information from the various programs that they administer, and store these individual collections of data within independent applications and databases. There is great opportunity to share and relate this information across the programs of the Commonwealth, and within individual agencies who find it difficult to relate important information between programs.

This capital project will enable the Commonwealth Office of Technology to establish one strategic data messaging infrastructure to support the data sharing needs of all Commonwealth agencies.

Failure to fund and implement this project at the enterprise level will result in multiple data messaging projects among the various agencies of the Commonwealth.

Enterprise Data Warehouse and Integration (2) $800,000   RF
The Enterprise Data Warehouse and Integration Infrastructure will be a critical environment for use by all agencies. It will not only help them to deliver their services to citizens, business, and employees by giving them access to cross-enterprise data, but it will allow for realigning and positioning of their services based

upon historical data and trend analysis. The Enterprise Data Warehouse and Integration project will establish a centralized infrastructure from which the Commonwealth can provide an integration vehicle of information.

Project Title / Description   Total Budget   Source(s)

Enterprise Desktop/Laptop Refresh (2)   **$16,000,000**   **RF**
The agencies of the Executive Branch have reached a critical stage with the current condition of desktop and laptop computers. Some of the computers now in use are not sufficient to run the latest operating systems and are running operating systems that are nearing their End of Life Cycle. These deficiencies also mean that from desk to desk employees have to run different versions of the same software, sometimes causing compatibility issues that result in frustration by the employees and costing the Commonwealth dollars in the lost time.

The Enterprise Desktop/Laptop Refresh Project will provide capital funds for the replacement of 9,000 Executive Branch computers in each year of the biennium. This number represents 1/4 of the branch's approximate 36,000 desktop computers, and places the branch in a position to refresh its desktop technology every four years.

It is estimated that 9,000 systems can be replaced each year at a cost of $8,000,000 representing $16,000,000 over the biennium.

COT would serve as the purchasing broker for the branch's desktop needs, and would recover the restricted fund costs through its existing chargeback structure.

Enterprise Identity and Access Management (2)   **$800,000**   **RF**
Similar in scope, pervasiveness, functionality and complexity as the Commonwealth's email environment is today, the planned Enterprise Identity and Access Management (IAM) Infrastructure will be a critical facility for use by all agencies that want to deliver their services to citizens, business, constituents and employees through the Commonwealth's Internet portal (Kentucky.gov).

The business drivers for the establishment of an Enterprise IAM Infrastructure include:
- Improved Security Measures for On-line Applications and Traditional Computing Environments
- Security Policy Re-enforcement (passwords, etc.)
- Improved Security Audit Compliance
- A Simplified Security Management Process
- Improved Customer Service and Convenience (single sign-on, self-service, 7/24)
- Reduced Operations Support (Applications Development, Help Desk, etc.)
- Lower Operational Costs for all Commonwealth Internet Accessible Systems

Enterprise Imaging and Document Management (2)   **$500,000**   **RF**
Consistent with the Commonwealth Office of Technology's ongoing implementation of an Enterprise Architecture that fully supports the efficient conduct of state business, as well as COT's provision of shared infrastructure services, this project establishes a central Imaging and Document Management (I/DM) Service for agencies in the executive branch of state government. This service creates a cost-effective capacity for agencies to meet I/DM requirements and to integrate and/or displace disparate agency image/document management projects and capacities. It capitalizes on (1) existing enterprise imaging and recordkeeping standards and price contracts, and (2) prior implementation of the Kentucky Department for Libraries and Archives Document Management / Digitization System (DMDS), which established an enterprise-class data conversion and imaging service for state government in 2002. The project will establish standards and a software and hardware platform for document management throughout the enterprise. Finally, it will complement the enterprise data integration project by linking and normalizing diverse data and document-based systems, to the extent possible.

Enterprise Infrastructure Security (2)   **$500,000**   **RF**
COT provides the infrastructure and related support for the Commonwealth's computing and communications environment. As part of the infrastructure support, COT also provides security applications and systems in order to reduce risk and better protect state government resources.

Providing a more secure infrastructure is critical to protecting the resources of the Commonweatlh and maintaining public confidence.

Enterprise Print Service (2)   **$3,000,000**   **RF**
The Commonwealth Office of Technology (COT) has established plans, procedures and contingencies to provide production printing services for agencies of the Commonwealth to assist in getting mission critical information to the citizens of the Commonwealth. COT leases high-speed B/W printers to support the needs of the agencies at a cost of $575,000 per year. COT also owns two highlight color devices to support the printing needs of the Department of Revenue, which costs $125,000 per year.

Agencies of the Commonwealth require large volumes of data to be printed, for their reporting needs and to get critical services to the citizens of the Commonwealth. COT averages 4.5 million pages of print each month, with the majority of this volume being mailed to citizens and Employers of the Commonwealth. Failure to get this information out in a timely manner could have an adverse impact to the health, safety and/or welfare of Kentucky's citizens. Large quantities of this volume have strict Federal guidelines and short timeframes on when it needs to be printed and mailed. The print speeds that these devices have, enables us to meet those deadlines and ensures the Citizens of the Commonwealth are getting the information they need on the services they receive from the Commonwealth.

Enterprise Server (z/OS) Upgrade/Replacement (2)   **$1,000,000**   **RF**
The COT historically has maintained greater than 95% capacity utilization of the mainframe and delay updates or upgrades as long as possible. However, we must plan for the possibility of growth spurts, latent demand, technological advances or end-of-life maintenance issues creating the need to upgrade or replace the centralized mainframe platform.

Enterprise Server Consolidation (2)   **$500,000**   **RF**
With the proliferation of single applications being deployed on independent servers or server farms, COT must plan for consolidating computing resources. As technology matures we are challenged to implement the best solutions that maximize the Commonwealth's return on investment. There is a high probability a large UNIX-based multi-application server will be required.

Enterprise Service Center (2)   **$480,000**   **RF**
The Commonwealth Office of Technology (COT) will implement processes and procedures based on ITIL best practices to evolve the current Help Desk into a fully functional Service Center.   This will include a new installation of the Help Desk Tool and knowledge base as well as the integration of the Asset Management, Change Management and Configuration Management modules.   The Service Center will be the single point of contact for all customers requiring IT support from COT.

With IT consolidation initiatives underway it is critical that proactive 24X7X365 service management models are in place to monitor and alert staff of potential infrastructure and/or application problems supported by COT. The costs associated with this initiative will provide numerous software toolsets and support components to provide adequate systems to proactively manage the Commonwealth IT environment.

A comprehensive Service Center will make it easier for customers to receive IT support from COT. The service Center will facilitate the restoration of normal operational services within agreed service levels and business priorities, while improving the usage of IT support resources and reducing the overall cost for IT support.

A consolidated network operations center will reduce costs associated with loss of IT services and ensure high availability of IT infrastructure and services. The investment in these tools and processes will decrease ongoing operational expenses over the life of the various systems supported.

Project Title / Description	Total Budget	Source(s)

Enterprise Software Development Infrastruct. (2) $1,150,000   RF
The implementation of an Enterprise Software Development Infrastructure will allow the Commonwealth to transform antiquated software development operations into a modern service-oriented architecture (SOA) that can deliver interoperability between heterogeneous applications and technologies and leverage reuse of components and applications throughout the Enterprise. This capability will speed the time from inception to delivery of internally developed software applications without sacrificing quality. This will result in a faster software development lifecycle which in turn will result in reduced development costs and faster realization of returns on investment.   Benefits include reduced maintenance costs, increased customer confidence and ease of upgrade/change through well-designed, low defect software.

Enterprise Software Licenses (2) $15,000,000   RF
The Executive Branch of Kentucky State Government is comprised of approximately 36,000 desktop and laptop computers. Across these varied computers, exists varying types and versions of standard software programs that agencies routinely use to conduct business. The types of software include operating systems, office productivity, electronic mail, databases, and virus and other security related products. Today, these software products are purchased and licensed on a per user / per cabinet / per agency basis.

This project represents an enterprise approach to licensing the most commonly required software products for the computers of the executive branch. By pooling these expenditures, the Commonwealth can maximize its spending power and ensure that all needed products are adequately licensed and purchased. The project also serves to ensure that standard products and versions are used across the enterprise.

Enterprise Storage Upgrade (2) $800,000   RF
The Commonwealth Office of Technology maintains a computing facility shared by all state agencies. This facility houses computer servers that perform the computing required by Kentucky's important enterprise applications such as MARS, UPPS, social welfare and social services systems, vehicle registration, employment assistance and the integrated tax systems as well as many others. The servers that support these critical enterprise applications utilize disk storage systems to store trillions of characters of information required to support these applications. Disk storage systems must be upgraded or replaced to accommodate growing data requirements, and to replace aging equipment that would otherwise become unreliable.

Ky Information Highway Expansion (2) $3,500,000   RF
The Kentucky Information Highway is a public/private partnership between the Commonwealth of Kentucky and the Local Exchange Carrier Telephone Group with BellSouth as the managing partner and Qwest Communications. This six-year old communications infrastructure has facilitated the deployment of technology as an enabling tool throughout the Commonwealth. The infrastructure is utilized by over 2000 state government locations, all 176 K-12 school districts with 1350 schools, over 80 postsecondary education locations, 200+ distance learning locations and numerous other political subdivisions. It also provides the infrastructure for statewide internet access as well as enterprise messaging.

Statewide Digital Orthoimagery Basemap Update 2 $500,000   RF
The initiative will continue the effort to build a shared basemap that can meet the needs of its users at the state, federal, local, and regional level. A common basemap reduces the cost of developing GIS applications and promote data sharing. Access to the basemap will be made available in the public domain.

The initial coverage was created from aerial photography flown from 1992 through 1998 (with some very limited coverage from 1999) at a cost of approximately $2,400,000 (2,930 quarter quads covering over 40,000 square miles). Of this, Kentucky's share was $600,000.

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2010-2012

Centralized Voice Services (3)   **$4,000,000**   **RF**
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Enterprise Applications Upgrade (3)   **$660,000**   **RF**
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Enterprise Data Messaging Infrastructure (3)   **$500,000**   **RF**
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Failure to fund and implement this project at the enterprise level will result in multiple data messaging projects among the various agencies of the Commonwealth.

Enterprise Data Warehouse and Integration (3)   **$800,000**   **RF**
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Enterprise Desktop/Laptop Refresh (3)   **$16,000,000**   **RF**
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sometimes causing compatibility issues that result in frustration by the employees and costing the Commonwealth dollars in the lost time.

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- Reduced Operations Support (Applications Development, Help Desk, etc.)
- Lower Operational Costs for all Commonwealth Internet Accessible Systems

Enterprise Imaging and Document Management (3)   **$500,000**   **RF**
Consistent with the Commonwealth Office of Technology's ongoing implementation of an Enterprise Architecture that fully supports the efficient conduct of state business, as well as COT's provision of shared infrastructure services, this project establishes a central Imaging and Document Management (I/DM) Service for agencies in the executive branch of state government. This service creates a cost-effective capacity for agencies to meet I/DM requirements and to integrate and/or displace disparate agency image/document management projects and capacities. It capitalizes on (1) existing enterprise imaging and recordkeeping standards and price contracts, and (2) prior implementation of the Kentucky Department for Libraries and Archives Document Management / Digitization System (DMDS), which established an enterprise-class data conversion and imaging service for state government in 2002. The project will establish standards and a software and hardware platform for document management throughout the enterprise. Finally, it will complement the enterprise data integration project by linking and normalizing diverse data and document-based systems, to the extent possible.

Enterprise Infrastructure Security (3)   **$500,000**   **RF**
COT provides the infrastructure and related support for the Commonwealth's computing and communications environment. As part of the infrastructure support, COT also provides security applications and systems in order to reduce risk and better protect state government resources. Providing a more secure infrastructure is critical to protecting the resources of the Commonweattlh and maintaining public confidence.

Project Title / Description	Total Budget	Source(s)

Enterprise Print Service (3) $3,000,000   RF

The Commonwealth Office of Technology (COT) has established plans, procedures and contingencies to provide production printing services for agencies of the Commonwealth to assist in getting mission critical information to the citizens of the Commonwealth. COT leases high-speed B/W printers to support the needs of the agencies at a cost of $575,000 per year. COT also owns two highlight color devices to support the printing needs of the Department of Revenue, which costs $125,000 per year.

Agencies of the Commonwealth require large volumes of data to be printed, for their reporting needs and to get critical services to the citizens of the Commonwealth. COT averages 4.5 million pages of print each month, with the majority of this volume being mailed to citizens and Employers of the Commonwealth. Failure to get this information out in a timely manner could have an adverse impact to the health, safety and/or welfare of Kentucky's citizens. Large quantities of this volume have strict Federal guidelines and short timeframes on when it needs to be printed and mailed. The print speeds that these devices have, enables us to meet those deadlines and ensures the Citizens of the Commonwealth are getting the information they need on the services they receive from the Commonwealth.

Enterprise Server (z/OS) Upgrade/Replacement (3) $600,000   RF

The COT historically has maintained greater than 95% capacity utilization of the mainframe and delay updates or upgrades as long as possible. However, we must plan for the possibility of growth spurts, latent demand, technological advances or end-of-life maintenance issues creating the need to upgrade or replace the centralized mainframe platform.

Enterprise Server Consolidation (3) $500,000   RF

With the proliferation of single applications being deployed on independent servers or server farms, COT must plan for consolidating computing resources. As technology matures we are challenged to implement the best solutions that maximize the Commonwealth's return on investment.

Enterprise Software Development Infrastruct. (3) $1,150,000   RF

The implementation of an Enterprise Software Development Infrastructure will allow the Commonwealth to transform antiquated software development operations into a modern service-oriented architecture (SOA) that can deliver interoperability between heterogeneous applications and technologies and leverage reuse of components and applications throughout the Enterprise. This capability will speed the time from inception to delivery of internally developed software applications without sacrificing quality. This will result in a faster software development lifecycle which in turn will result in reduced development costs and faster realization of returns on investment.   Benefits include reduced maintenance costs, increased customer confidence and ease of upgrade/change through well-designed, low defect software.

Enterprise Software Licenses (3) $15,000,000   RF

The Executive Branch of Kentucky State Government is comprised of approximately 36,000 desktop and laptop computers. Across these varied computers, exists varying types and versions of standard software programs that agencies routinely use to conduct business. The types of software include operating systems, office productivity, electronic mail, databases, and virus and other security related products. Today, these software products are purchased and licensed on a per user / per cabinet / per agency basis.

This project represents an enterprise approach to licensing the most commonly required software products for the computers of the executive branch. By pooling these expenditures, the Commonwealth can maximize its spending power and ensure that all needed products are adequately licensed and purchased. The project also serves to ensure that standard products and versions are used across the enterprise.

Enterprise Storage Upgrade (3) $800,000   RF

The Commonwealth Office of Technology maintains a computing facility shared by all state agencies. This facility houses computer servers that perform the computing required by Kentucky's important enterprise applications such as MARS, UPPS, social welfare and social services systems, vehicle Project

registration, employment assistance, and the integrated tax systems as well as many others. The servers that support these critical enterprise applications utilize disk storage systems to store trillions of characters of information required to support these applications. Disk storage systems must be upgraded or replaced to accommodate growing data requirements, and to replace aging equipment that would otherwise become unreliable.

Ky Information Highway Expansion (3)   **$3,500,000**   **RF**
Funds from this project have been used to maintain and support the existing infrastructure. KIH funds are being used to acquire additional infrastructure components required to meet federal and state mandates, i.e. the Health Information Privacy and Portability Act (HIPPA). Funds from this project have also been used to acquire the necessary equipment to support the redesign of the Commonwealth's network infrastructure to support e-government initiatives. The funds also provide for maintenance of the KIH infrastructure to replace aging equipment as well as acquiring new technology to respond to the increasing demand from agencies.

Statewide Digital Orthoimagery Basemap Update 3   **$500,000**   **RF**
The initiative will continue the effort to build a shared basemap that can meet the needs of its users at the state, federal, local, and regional level. A common basemap reduces the cost of developing GIS applications and promote data sharing. Access to the basemap will be made available in the public domain.

The initial coverage was created from aerial photography flown from 1992 through 1998 (with some very limited coverage from 1999) at a cost of approximately $2,400,000 (2,930 quarter quads covering over 40,000 square miles). Of this, Kentucky's share was $600,000. The rest was funded through federal programs administered by the US Geological Survey (USGS), Farm Service Agency (FSA), and Natural Resources Conservation Service (NRCS).

As the only accurate large scale aerial imagery available for most of Kentucky, particularly the more rural areas, this imagery is widely used. For example, nearly all PVA offices now use the DOQQs as a base for their parcel maps.

*Notes
- Priority rankings were required to be assigned only to those projects proposed to be financed from the state General Fund (cash or bonds) in 2006-08; all other projects are listed in alphabetical order.
- Descriptions are as provided in the "Brief Description and Justification" field of the agency's capital plan submission.
- Sources: AB = Agency Bonds; FF = Federal Funds; RF = Restricted Funds; OT = Other Funds; TF = Road Fund